

In the Claims

1. (Currently amended) A gear drive having at least one continuously variable drive shaft bearing float and preload adjustment system with an integral seal carrier for a bearing assembly on a drive shaft that protrudes from the gear drive that comprises:

a threaded housing bore in a housing for the gear drive;

a threaded adjustment ring with ring threads that mate the threads in the housing bore and a thrust surface that constrains a bearing assembly for a drive shaft that protrudes from the housing in fixed axial alignment through the adjustment ring to provide adjustable float and preload of the bearing assembly; and

at least one shaft seal carried by an inner axial surface segment of said threaded adjustment ring and mating with the drive shaft mounted within the adjustment ring.

2. (Original) The gear drive of claim 1 wherein the threaded adjustment ring is loosened within the housing bore to increase float of the drive shaft bearing.

3. (Original) The gear drive of claim 1 wherein the threaded adjustment ring is tightened within the housing bore to increase preload of the drive shaft bearing.

4. (Currently Amended) A bearing assembly float and preload adjustment system with an integral seal carrier for a drive shaft that protrudes from a gear drive housing in fixed axial alignment with the housing, comprising:

a threaded housing bore in a housing for the gear drive;  
a threaded adjustment ring with ring threads that mate the threads in the housing bore and a thrust surface that constrains a bearing assembly for the drive shaft to provide a continuously adjustable float and preload of the bearing assembly; and

at least one shaft seal carried by an inner axial surface segment of said threaded adjustment ring and mating with the drive shaft mounted within the adjustment ring.

5. (Original) The bearing assembly of claim 4 wherein the threaded adjustment ring is loosened within the housing bore to increase float of the drive shaft bearing.

6. (Original) The bearing assembly of claim 4 wherein the threaded adjustment ring is tightened within the housing bore to increase preload of the drive shaft bearing.

7. (New) The gear drive of claim 1 including a lubrication reservoir formed through said adjustment ring and open to the drive shaft.

8. (New) The bearing assembly of claim 4 including a lubrication reservoir formed through said adjustment ring and open to the drive shaft.

9. (New) A gear drive comprising:

a housing;

a housing bore in a housing for the gear drive, said housing bore including internal threads;

a threaded adjustment ring with ring threads that mate the threads in the housing bore and a thrust surface that constrains a bearing assembly for the drive shaft to provide a continuously adjustable float and preload of the bearing assembly;

a drive shaft extending through said housing bore and adjustment ring;

a lubrication reservoir formed through said adjustment ring and open to the drive shaft; and

at least one shaft seal mating with the drive shaft mounted within the adjustment ring.

10. (New) The gear drive of claim 9 wherein the threaded adjustment ring is loosened within the housing bore to increase float of the drive shaft bearing.

11. (New) The gear drive of claim 9 wherein the threaded adjustment ring is tightened within the housing bore to increase preload of the drive shaft bearing.

12. (New) The gear drive of claim 9, in which said at least one shaft seal is carried by an inner axial surface segment of said threaded adjustment ring.